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ABSTRACT

Intended for administrators of schools within the Hawaii Department of Education, this document provides descriptions of 34 alternative strategies implemented by small, rural, and/or isolated secondary schools across the nation to improve the quality of their vocational programs. Introductory materials discuss the document's purpose, the need for the study that identified the approaches, limitations of the study, and general conclusions from a concurrent literature review. The descriptions of the strategies follow. Each description provides information under the following headings: definition, purpose, description, planning, staff requirements, multimedia use, initial cost, and additional cost per student. The strategies considered are: area vocational centers, area vocational schools, artists or experts in the school, audiovisual modules, community resource trainers, competency-based/individualized instruction vocational education, computer-assisted instruction, conference calls, the cooperative schools concept, cooperative vocational education, corporate-sponsored school programs, correspondence study, the employment training office option, flexible scheduling, independent studies, individualized instruction, intermediate units, itinerant or circuit teachers, job creation, the learning center system, microcomputers, minicourses, mobile instructional materials, mobile labs, paraprofessionals and aides, phasing, programmed instruction, rural student vocational programs, student exchanges, teacher exchanges, television and radio, two-in-one (teaching two or more subjects simultaneously), two-way televised vocational education, and mining community resources. A summary offers suggestions for choosing a strategy. A bibliography is appended. (YLB)

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ALTERNATIVE STRATEGIES TO IMPROVE AND EXPAND THE DELIVERY OF VOCATIONAL EDUCATION IN SMALL, RURAL, AND/OR ISOLATED SECONDARY SCHOOLS IN HAWAII

RESEARCH COORDINATING UNIT
OFFICE OF THE STATE DIRECTOR FOR VOCATIONAL EDUCATION
HONOLULU, HAWAII

AUGUST, 1983

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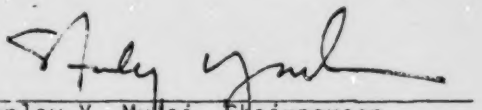
Preface

Providing quality vocational education to all students who can profit from such experience is one of the goals in the State Master Plan for Vocational Education. Unfortunately, achieving this goal is particularly difficult in small, rural, and/or isolated secondary schools because of the complex issues such as small enrollments, austere budgets, great distances from urban centers, and large teacher turnover with which these special schools are faced.

There are many problems to be overcome. Yet, the literature shows that many schools facing similar problems have developed innovative strategies to expand and improve their vocational offerings.

This document describes over 30 approaches implemented by small, rural, and/or isolated schools across the nation to improve the quality of their vocational programs. While no one approach may be the panacea we are seeking, there are many ideas in this report which hold promise.

It is our sincere hope that this document will serve, at the very least, as a basis for discussion to meet the goals of the State Master Plan. With commitment and enthusiasm from school officials and vocational educators, students in all of the small, rural, and/or isolated schools of Hawaii can be provided quality vocational education.



Stanley Y. Mukai, Chairperson
State Board for Vocational Education

TABLE OF CONTENTS

Preface..... i

Introduction..... 1

Purpose..... 2

Need for the Study..... 2

Limitations..... 3

Review of the Literature..... 4

- Area Vocational Center..... 6
- Area Vocational School..... 8
- Artists or Experts in the School..... 10
- Audio-Visual Modules..... 12
- Community Resource Trainer (CRT)..... 14
- Competency-Based/Individualized Instruction Vocational Education..... 16
- Computer-Assisted Instruction..... 18
- Conference Call..... 20
- Cooperative Schools Concept..... 22
- Cooperative Vocational Education..... 24
- Corporate-Sponsored School Programs..... 26
- Correspondence Study..... 28
- Employment Training Office (ETO) Option..... 30
- Flexible Scheduling..... 32
- Independent Study..... 34
- Individualized Instruction..... 36
- Intermediate Units..... 38
- Itinerant or Circuit Teachers..... 40
- Job Creation..... 42
- Learning Center System..... 44
- Microcomputers..... 46
- Mini Courses..... 48
- Mobile Instructional Materials..... 50
- Mobile Labs..... 52
- Paraprofessionals and Aides..... 54
- Phasing..... 56
- Programmed Instruction..... 58
- Rural Student Vocational Program (RSVP)..... 60
- Student Exchanges..... 62
- Teacher Exchanges..... 64
- Television and Radio..... 66
- Two-In-One..... 68
- Two-Way Televised Vocational Education..... 70
- Mining Community Resources..... 72

Summary..... 74

Bibliography..... 76

ALTERNATIVE STRATEGIES TO IMPROVE AND EXPAND THE DELIVERY OF VOCATIONAL EDUCATION IN SMALL, RURAL, AND/OR ISOLATED SECONDARY SCHOOLS IN HAWAII

Introduction

This document provides descriptions of 34 alternative strategies to improve and expand the delivery of vocational education in small, rural, and/or isolated secondary schools in Hawaii. These strategies were identified by a thorough state-by-state search of programs designed to serve this special category of schools.

Although the State of Hawaii and its education system are unique in many respects, the dilemma of providing broader vocational opportunities in small, rural, and/or isolated secondary schools is a nationwide problem. Small enrollments, austere budgets, great distances from urban centers, disparity of course offerings, large teacher turnover; these are but a few of the complex issues shared by administrators of these schools.

The problems appear to be common yet the strategies implemented in various sites to expand vocational offerings are respectful of the qualities and characteristics of each community. Perhaps individual administrators of schools within the Hawaii Department of Education system will also consider selecting strategies best suited to the unique features of the community, students, and faculty involved. A single solution, though easier to implement, may not be the best alternative.

At the very least, this document should provide a springboard for discussion. With commitment and enthusiasm from school officials and vocational educators, perhaps these discussions can lead to expanded and diversified vocational opportunities for students enrolled in small, rural, and/or isolated secondary schools in Hawaii.

Purpose

This document summarizes 34 approaches or alternatives for improving and expanding the vocational education opportunities in small, rural, and/or isolated secondary schools. Where possible, the descriptions include comments on staff, facility, and equipment (multimedia) requirements.

The concise format of this document allows for examination of the various alternatives in an objective manner. This should aid school officials in their decision-making process concerning the adaptation or adoption of any of the strategies presented.

Need for the Study

Goal Eight of the State Master Plan for Vocational Education concerns accessibility and proclaims that opportunities for quality vocational education shall be provided to all students who can profit from such experiences. The State Master Plan further urges the Department of Education (DOE) to provide students in each district with access to all occupational clusters.

Considerable efforts have been made by the DOE to reach this goal. Three individual vocational programs have been developed to serve specific populations. The Introduction to Vocations (IV) Program is designed to provide instruction to students with different interests, aptitudes, and abilities for career preparation through occupational experiences. Disadvantaged youth are served through the Pre-Industrial Preparation (PIP) Program and handicapped students are enrolled in the Occupational Skills (OS) Program. At least one of each of these programs (IV, PIP, OS) is in every high and special school.

However, there is a disparity among schools in the cluster of courses offered within these programs. For example, one high school might offer a cluster of business courses and a cluster of agriculture courses. Another school might offer clusters in not only business and agriculture but also food service and construction.

Furthermore, the number and types of courses within each cluster vary among schools. One school might offer six levels of typewriting; another school might offer four levels.

The DOE is aware of these differences and has diligently attempted to work towards parity. In searching for solutions, the DOE has sought the advice of the State Advisory Council on Vocational Education (SACVE). Eleven approaches for improving and expanding vocational education in the secondary schools were identified in joint DOE and SACVE meetings.

According to testimony provided by the assistant superintendent of education during the 1983 legislative session, of these 11 approaches, the establishment of an Area Vocational Center seemed to be the best alternative to further investigate. However, the testimony also warned that there are major disadvantages to area vocational centers and cautioned that this approach may not be feasible at all in some districts.

Considering this analysis, it becomes imperative to explore as many options as possible so that all students may benefit from expanded vocational offerings. This document has been developed in response to that need.

Limitations

As indicated earlier, a state-by-state search of alternative programs for the delivery of vocational education programs in small, rural, and/or isolated schools was performed. Since many of the approaches

discovered were duplicated in other sites, only the major concept is reported. In some instances, where a variation of the approach has been employed, that strategy is described. Generally variations were so slight it did not seem prudent to report every program. Thus the various approaches have been grouped into the 34 strategies in this document.

It is likely, too, that some programs have been missed entirely. This is because the research is limited to those programs which were classified in the Education Resources Information Center (ERIC) or in the National Center for Research in Vocational Education collection of exemplary projects developed with funds from the Vocational Education Amendments of 1976. Besides these sources of information, a letter requesting assistance in identifying programs to improve the delivery of vocational programs in small, rural, and/or isolated schools was sent to every state vocational education research coordinating unit director.

Review of the Literature

A review of the literature concerning alternatives for the delivery of vocational education programs reveals a wealth of philosophical and untested theses. The problems of providing equal vocational opportunities regardless of the size of a school and its location are apparently shared throughout the nation.

The literature shows no disagreement in the finding that the administration of vocational programs in small, rural, and/or isolated schools is beset with its own special perplexities. Whether the school is located in Alaska, Georgia, New York, or Wyoming, similar problems

are inherent. These special schools suffer from inadequate financial support, deficient curriculum offerings, inability to recruit and retain quality personnel, insufficient facilities, and limited organizational structure.

Unfortunately, solutions for these problems are not so well understood. Unless a school has an unlimited source of funds, strategies to improve and expand vocational offerings require a great deal of commitment from teachers, administrators, counselors, students, and community members alike.

The strategies described on the following pages are practices which have proven successful under certain conditions. Replication of these approaches will probably not be possible without adaptation or modification. Nevertheless, this overview of ideas can be used as a point of departure from traditional vocational education program delivery methods.

AREA VOCATIONAL CENTER

Definition	An existing school is designated as the center for coursework in one or more particular vocational education programs.
Purpose	To consolidate resources while expanding vocational education opportunities for students.
Description	Each participating school develops an advanced skill center in one or more occupational areas. Students attend a home school for basic education but receive their vocational education at the skill center school specializing in their particular interest.
Planning	School officials within a participating geographic district determine which vocational education programs should be centered at each school. Transportation, scheduling, and available facilities and equipment must be considered in determining area center locations. Facilities may have to be modified to accommodate an increased number of students and equipment may have to be re-located or purchased. Teaching staff may also have to be augmented.
Staff Requirements	Additional staff will probably be required to accommodate the increased number of students in one location. Staff may be shared with "non-center" schools which are providing only introductory courses.
Multimedia Use	High, as instructors will have more opportunity to specialize and therefore more time to locate, acquire, and use multimedia.
Initial Cost	High
Additional Cost per Student	Transportation costs will increase. Instructional materials cost may also increase if consumables are used.

Advantages	*Disadvantages*
Students could be provided expanded program offerings.	Students will have to move locations during the school day.
Resources for particular vocational programs would be concentrated in one place.	Facilities may have to be modified and equipment obtained--high start-up costs.
More advanced vocational education might be made available.	Logistics can be formidable.

AREA VOCATIONAL SCHOOL

Definition	A high school or regional center which specializes in vocational education.
Purpose	To offer a spectrum of vocational education programs in a central location.
Description	An existing school is modified or a new facility is built to house all vocational education programs for a particular geographic area.
Planning	Building or remodeling a school to serve as an area vocational school requires the same detailed planning needed for starting any institution. Aside from actual building requirements, plans must be developed for selection and transportation of students, credit correlation, and housing, if necessary. Staff must be hired and equipment leased or purchased. There must be articulation with surrounding schools and community colleges.
Staff Requirements	Additional staff and administration will have to be hired.
Multimedia Use	High, particularly if individualized instruction is used to expand program offerings.
Initial Cost	High
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
The visibility of vocational education might be enhanced.	Students may not want to leave their "home school."
Resources would be concentrated in a single location.	Introductory vocational courses (and their expense) may have to be made available at feeder schools for students who do not know if they wish to major in a particular occupational program.
A wide range of program offerings could be made available.	

ARTISTS OR EXPERTS IN THE SCHOOL

Definition	A community expert, artist, or craftsworker provides short-term instruction in a vocational speciality.
Purpose	To enrich vocational education experiences.
Description	A recognized community expert or craftsworker provides demonstrations of a specific skill. The demonstration takes place in the school or on the job, during school hours or a specially arranged time. The artist may be paid an honorarium.
Planning	Artists or experts in the community must be identified and asked if they would participate in the program. Interests and needs of the students must be assessed. A demonstration site and time must be decided upon. Materials or other resources must be collected.
Staff Requirements	No additional staff are required, but existing staff will have to assist in the planning. One staff member may be assigned coordinating responsibilities.
Multimedia Use	Minimal
Initial Cost	Some funds may be needed for honorariums.
Additional Cost per Student	None

Advantages	*Disadvantages*
Community involvement is increased.	Artists or experts may not be proficient at demonstrating.
Up-to-date methods will be shared with students.	Arranging for leave from work for craftsworkers may be difficult.
A variety of skills can be shared with students.	

AUDIO-VISUAL MODULES

Definition	Audio-visual instructional modules for specific occupational training programs are prepared centrally and loaned to or purchased by individual schools.
Purpose	To provide vocational educational opportunities for a greater proportion of secondary students.
Description	Each module contains slides, an audiocassette, script, tests, and handouts. Typically, each includes an introduction/rationale; clearly stated behavioral objectives; pre- and post-tests; and carefully sequenced instructional cycles including active learner involvement, practice, and reinforcement. The community college located in a specific DOE district might serve as the center for development.
Planning	Training and direct experience in instructional materials development must first be provided so that viable modules are produced. Then decisions must be made concerning which instructional programs should be included in module development. Once module development has begun, cooperating school staffs should be provided inservice on the use of the modules.
Staff Requirements	Staff would have to be provided training on developing and preparing modules. Receiving school staff members may need inservicing on using the modules.
Multimedia Use	High
Initial Cost	High, but reproduction costs are inexpensive.
Additional Cost per Student	Minimal

Advantages	*Disadvantages*
A variety of instructional programs can be provided to students.	Initial development requires time and money.
Interaction among teachers is promoted during the production stages.	Inservicing would be necessary.

COMMUNITY RESOURCE TRAINER (CRT)

Definition	Vocational training is provided by utilizing community volunteers who work closely with a vocationally-certified school person.
Purpose	To provide a variety of vocational programs.
Description	The community resource trainer (CRT) is a person in the community who agrees to convey a skill, trade, or craft to a student who has career aspirations in the occupation represented by the trainer. The CRT works with a CRT coordinator, employed by the school, to develop a training plan for each student. The CRT identifies the skill requirements; the CRT coordinator supplies expertise on instructional strategies. Students define their career goals in pursuing the training program. Typically, CRTs volunteer their service as trainers. Some are paid a small stipend to cover hourly wages lost during the daily training period. Some CRTs receive reimbursement for costs of materials used.
Planning	Career interests of students need to be ascertained. Many are not aware of the occupations available in their community. In identifying CRTs, the CRT coordinator may also develop a list of possible occupations for students to explore. A schedule of in-school and on-the-job time for each student must be prepared in coordination with CRTs and school requirements. Union restrictions have to be considered.
Staff Requirements	Hiring or appointing the CRT coordinator is a crucial step. This person must counsel students, work with community members, and take responsibility for administrative details. Inservice for the CRT coordinator is advisable.
Multimedia Use	Minimal
Initial Cost	A CRT coordinator may have to be hired. Insurance must be provided in case students are hurt on the job.
Additional Cost per Student	Reimbursements to CRTs may go up proportionately with the number of students enrolled.

Advantages

Students are allowed flexibility in choosing and re-evaluating career choices.

Community resources are used to the maximum.

School life is integrated into community life.

CRT program provides skills as opposed to providing only exposure to occupations.

The skills of retired persons and hobbyists can be used.

Disadvantages

The CRT is not a professional teacher.

Coordination and careful planning are essential.

The CRT coordinator should be in-serviced.

New CRTs have to be obtained constantly.

COMPETENCY-BASED/INDIVIDUALIZED INSTRUCTION VOCATIONAL EDUCATION

Definition	Job tasks are organized by individual competencies which students master at their own rate.
Purpose	To provide occupation-specific skill development on an individualized instruction basis.
Description	Specific tasks or competencies for each instructional objective are determined and lesson plans are prepared accordingly. A variety of instructional modes should be made available for each task so students can receive information in a manner best suited for their individual needs. Students are pre-tested to determine at what level they should enter a program. Students must master a certain competency before moving on to more advanced objectives. Students progress at their own rate. Some programs may also have available specialty areas which students could choose to study after displaying knowledge of the basics. Thus, many vocational options could be available through one program.
Planning	Tasks analyses of occupations must be performed and validated for currency. Following this, instructional methods of acquiring each skill must be determined and a learning packet for each prepared. Evaluation procedures for the competency objectives must be clearly defined. Resources--materials, equipment, alternative teaching machines--must be obtained so that the student has access to a learning lab. Scheduling and credit assignment must also be determined.
Staff Requirements	No additional staff are required. Inservicing will be essential and time for preparing learning packets may be an additional expense.
Multimedia Use	High
Initial Cost	High. Learning packets must either be purchased or developed.
Additional Cost per Student	Minimal unless consumable instructional materials are used.

Advantages

Advanced placement for students with experience outside of school is possible.

Teacher becomes a manager of the learning environment.

Mastery of skills is the basis for promotion rather than grades.

Students can work at their own pace and choose specialty options.

Instructional objectives are clearly stated and related to business and industry needs.

Disadvantages

Updating materials is time consuming.

Some students may have difficulty working on their own.

Knowledge may be de-emphasized for specific skill mastery.

Start-up costs may be expensive.

In-service training for instructors will probably be necessary.

COMPUTER-ASSISTED INSTRUCTION

Definition	The computer is used as a teaching machine to present information to students and guide them through a lesson.
Purpose	To increase learning efficiency and to offer a wider variety of and/or advanced vocational programs.
Description	Computers can add another dimension to the traditional textbook and teacher mode by adjusting the presentation of some of the information to the response of the student. Consequently, students can progress at their own rate and complete more advanced instructional objectives. At the same time, teachers can spend less time presenting and explaining information. This leaves more time for planning and developing materials, analyzing student learning problems, and counseling.
Planning	Initial planning includes the investigation of the type and cost of computers and software available. Teachers may need inservicing in order to fully utilize the potential of the computer.
Staff Requirements	It may be helpful to have a computer specialist on staff.
Multimedia Use	The computer itself must be considered media.
Initial Cost	High unless donations from business are used.
Additional Cost per Student	Increases with the number of students may not be constant because computer use rates vary according to the total amount of time used.

Advantages

Computer-assisted instruction efficiently and effectively adds to the instructional process.

A variety of software programs are available which are self-directed.

A teacher with expertise in the subject may not be essential.

Disadvantages

Initial costs are high.

The computer by itself is impersonal; students may need commensurate teacher or other person contact.

Teacher inservice may be necessary before the program could be implemented.

CONFERENCE CALL

Definition	The telephone is used as an instructional tool to provide students access to experts or specialists all over the world.
Purpose	To expand the information base from which students can draw.
Description	Part or all of a vocational class can be taught by use of the telephone. A specialist in a particular subject or area of concern is contacted and asked to provide a lesson over the telephone. For example, an auto mechanic might provide specific techniques for solving brake problems on European-made sports cars.
Planning	If an entire class is to be taught by telephone, the student materials must be of a quality to thoroughly explain the content. The telephone call, then, is used for students to ask questions and to analyze and expand the content. Supplementing instruction by way of the telephone requires detailed planning to establish a date and time for the call. A telephone speaker must be obtained so that all of the students can hear the caller. Specialists in the field, who are willing to participate in the program, need to be identified.
Staff Requirements	No additional staff are required.
Multimedia Use	The telephone becomes an additional medium.
Initial Cost	A telephone speaker may be required. Long distance charges will vary for each phone call.
Additional Cost per Student	None

Advantages	*Disadvantages*
This is an inexpensive method of involving specialists or experts in the vocational program.	Installation of phones and a telephone speaker may be necessary.
Community interaction may be promoted.	Appropriate specialists have to be identified.

COOPERATIVE SCHOOLS CONCEPT

Definition	Two or more schools share or exchange curriculum, students, teachers, equipment, etc.
Purpose	To improve the quality of the curriculum and increase vocational options for students. Schools within close geographic proximity share resources to foster a spirit of cooperation. The exchange may begin with media resources and expand into more complex sharing, such as teacher time, as the concept gains support within the schools.
Planning	Building and maintaining a sister-school relationship requires planning and persistent effort. The tendency to compete must be overcome by the desire to cooperate. Administrative commitment from cooperating schools is essential. Concomitantly, this enthusiasm must be shared by faculty members. An inventory of resources within each school is necessary to determine what can be shared. This inventory serves a dual purpose in that it aids the school administrator in better utilizing resources already on hand. The inventory will also uncover gaps, thus identifying needs.
Staff Requirements	No additional staff time is required. Taking time for total staff involvement in orientation and planning might be a valuable investment.
Multimedia Use	Sharing provides access to multimedia developed by other faculty which may in turn stimulate acquisition and media production.
Initial Cost	There may be an increase in postage and mileage expenditures. Formal orientation and planning time may require special funding.
Additional Cost per Student	Nominal

Advantages

Control of the education process is with the schools.

Inexpensive because the system uses resources currently available. Funds for capital expenditures or additional staff are not required.

Disadvantages

Schools must be in close geographic proximity for maximum sharing.

If students are involved in the exchange, transportation needs to be provided.

COOPERATIVE VOCATIONAL EDUCATION

Definition	Students receive instruction including required academic and related vocational courses by alternating study in school with experience in a job. These two experiences are planned and supervised by the school staff and employer so that each contributes to the vocational education of the student.
Purpose	To develop occupational competencies through on-the-job work experience.
Description	Students receive instruction and on-the-job training in accordance with written training agreements coordinating the two experiences. The instruction provided in the classroom is appropriate to the occupational objective of the student and is supervised by a cooperative vocational education instructor. Work and school attendance may be on alternate half or full days, weeks, or other periods of time to maximize student experiences. Training on the job is conducted in conformance with employment laws. The student is legally employed and paid the prevailing wage.
Planning	On-the-job and classroom experiences must be coordinated. The teacher coordinator must identify job sites, determine student interests, match jobs and students, and prepare training agreements with the input of both employer and student. Once the student is on the job, site visitations are made by the coordinator to update training plans and to evaluate the progress of the student.
Staff Requirements	Staff responsible for coordinating the program should have inservice training on cooperative vocational education programs.
Multimedia Use	High if individualized instruction is used.
Initial Cost	One-half hour of coordination time for each student per week is needed. This may involve the hiring of additional staff. Coordinator transportation expenses must also be reimbursed.
Additional Cost per Student	None

Advantages	*Disadvantages*
Community involvement in the education process is increased.	A teacher coordinator may have to be employed.
Vocational training is relevant to the needs of the community.	It may be difficult to obtain job sites.
Students are provided an integrated education.	It is imperative that classroom instruction and on-the-job training be coordinated; this can be difficult.

CORPORATE-SPONSORED SCHOOL PROGRAMS

Definition	Local businesses sponsor a vocational training program within their operating complex or through simulation at the school.
Purpose	To provide particular vocational skills needed by community-based business and industry.
Description	The business or industry becomes involved with the school by offering tours of its facilities, donating materials for classroom use, and establishing an interview program with students to assess their interests while providing interview experience. The company then identifies positions in which students could be placed. Where possible, or perhaps as an alternative to the on-site experience, the school establishes a simulated operation of the cooperating company so that classroom experience ties in with on-the-job experience. For example, within the business department, students may operate an automobile insurance firm which is a simulated production of an actual business.
Planning	Cooperation of business and industry personnel must be obtained. If on-site experience is possible, working hours, transportation, etc., must be determined. For the simulation portion, forms must be obtained and operating procedures flow charted so the "business" may be transferred to the school.
Staff Requirements	No additional staff are required. Planning time for starting up the simulation may be required.
Multimedia Use	Minimal
Initial Cost	Minimal particularly if the cooperating business donates supplies.
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
Classroom assignments can be clearly linked to business needs.	Students may be too narrowly trained.
Community-school relations are strengthened.	Planning time may be required for school staff.
Local businesses may share some of the expenses of an educational program.	

CORRESPONDENCE STUDY

Definition	Professionally prepared correspondence study programs are purchased by the school to supplement the curriculum.
Purpose	To expand curriculum offerings to students.
Description	Correspondence courses are available from an array of agencies and private companies. An advisory instructor in the school assists students in arranging a study schedule, taking tests, and mailing completed lessons.
Planning	Some research would be necessary to determine the kinds of correspondence programs available and the benefits and disadvantages of each. Information concerning ordering, cost, acceptability by accrediting authorities, etc., would have to be ascertained.
Staff Requirements	Although additional staff may not be required, supervision must be provided.
Multimedia Use	Minimal
Initial Cost	Costs for consumable texts and/or materials vary depending on the correspondence study.
Additional Cost per Student	Costs will increase proportionately with the number of students.

Advantages	*Disadvantages*
Control of the education process is with the school.	The student may not receive adequate assistance from the supervisory teacher.
The system provides for flexibility and is responsive to a wide range of student interests.	Costs can be high.
	It may be difficult to locate appropriate course materials.

EMPLOYMENT TRAINING OFFICE (ETO) OPTION

Definition	An alternative education program, offered through the University of Hawaii Community College System, which provides job skills training.
Purpose	To provide occupational skill training to secondary-level students having difficulty with their regular school program.
Description	The Employment Training Office (ETO) is part of the University of Hawaii Community College System which provides job skills training in auto mechanics, auto body repair and painting, clerical, food preparation, and baking occupations. Public school students are provided an opportunity to enroll in a special ETO program. The program is open to any student who can profit from job skills training but has predominantly served those who are looking for an alternative because of deficiencies in high school credits, poor attendance, or some other alienation problem. Students are referred to ETO by their school counselors and must go through an assessment process to determine their suitability for the program.
Planning	School officials and counselors must contact the Employment Training Office to obtain the necessary forms and an outline of procedures to refer students to the program. Generally, a school counselor serves as a liaison between ETO and the student.
Staff Requirements	No additional staff are required.
Multimedia Use	Varies with programs.
Initial Cost	Nominal
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
An alternative is provided to those students wishing specific job skills training which the school might not be able to offer. The training is available free of charge.	ETO locations are limited and may not be within a reasonable travel distance for some students.

FLEXIBLE SCHEDULING

Definition	The length of classroom time is varied for individual courses on the basis of instructional objectives.
Purpose	To increase efficiency by adjusting classroom time to match instructional objectives.
Description	The school day is divided into 15 or 20 minute modules. Each course is then assigned the appropriate number of modules. Research shows that for maximum development in skills such as typewriting, intensive practice for a short period of time at frequent intervals is more effective. Conversely, learning to disassemble a carburetor is more effective if sufficient time is available to complete the entire process. Flexible scheduling allows for adjusted classroom time to accommodate these types of diverse needs.
Planning	Analyses of instructional objectives for all programs are required. A master plan for each course must be developed. This plan may vary in the number of modules required during the school year. For example, beginning typing might be made up short, frequent practice periods initially and gradually build to longer classroom periods when students have learned the keyboard and strengthened the muscles in their hands.
Staff Requirements	No additional staff are required. Inservice and planning time would probably be necessary.
Multimedia Use	More efficient use of instructional time may encourage the use of multimedia.
Initial Cost	Scheduling may be more expensive and require a computer. Funding may have to be provided for faculty inservice and planning time.
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
Flexible scheduling encourages the use of a variety of teaching methods.	Detailed planning and monitoring are essential.
Instructional objective analyses tend to increase time and staff efficiency in the classroom--better classroom management.	Staff inservicing will probably be necessary.
Scheduled classroom time responds to instructional objectives rather than imposed rigidity based on arbitrary time periods.	Additional planning time for staff may be required initially.

INDEPENDENT STUDY

Definition	The completion of programs or parts of programs with little or no teacher assistance, using whatever curriculum materials are available.
Purpose	To provide a means of expanding the curriculum for students who have the ability to complete programs through their self-directed study.
Description	Many students can complete programs by reading and studying instructional materials on their own. This option can generally be provided with few administrative and program changes.
Planning	Providing students with study space, time, materials, and credit can usually be done cooperatively among the vocational instructors and school administrators. Instructors may have to locate materials to meet the special interest of any one student. Close supervision of independent study students may not be necessary, but they should have professional assistance available. Credit for independent study should also be arranged. Competency achievement may be one method of granting credit.
Staff Requirements	No additional staff are required.
Multimedia Use	Minimal
Initial Cost	Some instructional materials may have to be purchased for students pursuing special interests.
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
Students develop independent learning skills.	Students will not benefit from teacher interaction.
Students can pursue their own special interest.	Some students do not do well in independent study situations.
The options for students are almost limitless.	Recordkeeping could become complicated.

INDIVIDUALIZED INSTRUCTION

Definition	A procedure for adapting the instructional process to the varying interests, goals, learning rates, and motivation of students.
Purpose	To enhance the depth of vocational offerings and to increase student performance.
Description	Coursework is divided into small instructional objectives which provide a simple form of assessing learner progress. Instructions for each instructional objective are provided in a variety of ways so that students choose their preferred learning time and method of learning.
Planning	Implementing individualized instruction requires efficient coordination of staff and materials resources. A sequential plan for the development of objectives is necessary. Individualized instructional materials can be purchased or the staff can prepare their own to more closely match their teaching goals. Even if most materials are purchased initially, staff will become involved in updating and adapting to meet local needs. Students, as well as faculty, need inservicing in the use of individualized materials. The program offers much freedom of choice which could be abused.
Staff Requirements	No additional staff are required unless a consultant is hired for initial inservicing on how to use and/or prepare individualized instructional materials. Time for developing or adapting materials is essential.
Multimedia Use	High. Multimedia should be used in a variety of ways to assist students through each instructional objective.
Initial Cost	High. Instructional materials must be obtained. Inservicing of faculty is essential. Staff will also need time to prepare materials.
Additional Cost per Student	Proportionate to amount of consumable instructional materials.

Advantages

Students develop independent learning skills.

The breadth and depth of curriculum offerings can be expanded to almost limitless ends.

The needs of the individual are met.

Disadvantages

Implementing individualized instruction requires a large initial effort.

Faculty and students alike must be committed and motivated to use the system.

Start-up costs can be high.

INTERMEDIATE UNITS

Definition	Intermediate units are non-profit corporations staffed with specialists to provide such services as instructional support; bilingual-bicultural, sex, handicap equity education; student assessment; staff development; etc.
Purpose	To enrich and expand school options while gaining expertise in specific priority programs.
Description	Intermediate units receive grants (generally from federal agencies) to provide training in specific priorities identified by the funding agency. The units, in turn, are in need of school settings in which to implement their programs. Hiring staff with special expertise and providing in-service training to faculty are common objectives for which the intermediate units are funded.
Planning	School officials may have to notify state administrators of their interest in being a pilot study site. As needs are expressed by intermediate units for pilot sites, the school can be suggested. (Note: Far West Lab, San Francisco, and Northwest Lab, Portland, have been particularly active in Hawaii.) Generally, the goal of the intermediate unit can be juxtaposed with the goals of the school.
Staff Requirements	No additional staff are required.
Multimedia Use	High. Intermediate units tend to keep current libraries of films and instructional materials.
Initial Cost	None
Additional Cost per Student	None

Advantages	*Disadvantages*
Consultants with specific expertise become available free of charge to the school.	Participation in a project generally calls for additional staff time. However, compensation is usually provided.
Up-to-date services are provided.	There may be no direct follow up of the project.
A variety of projects can be accomplished.	

ITINERANT OR CIRCUIT TEACHERS

Definition	Teachers travel from school to school.
Purpose	To increase curriculum offerings for students.
Description	Itinerant teaching provides specialized coursework and expands the offerings available in a school. While it may be too expensive for each school to employ a specialist in a given occupational area, several schools can benefit by sharing that expertise. For example, the use of carpentry tools could be taught on-site during the regular classroom time. The skills could then be applied to house construction through an itinerant carpenter--the first session could be foundation, the next framing walls, etc.
Planning	A consortium of representatives from each of the schools to be served by the itinerant teacher is formed. Mutual needs are discussed and a schedule for the itinerant teacher is prepared. Instructional materials must be obtained and decisions made concerning their ownership. All schools sharing the expertise of the itinerant teacher should have on hand or easy access to all materials needed in the classroom.
Staff Requirements	No staff are required in addition to the itinerant teacher.
Multimedia Use	Minimal
Initial Cost	Salary or consultant contract for itinerant teacher plus mileage.
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
Vocational instruction not offered in the regular curriculum can be provided.	Coordinating the time and schedule of the itinerant teacher may be difficult.
Costs for specialist may be shared by several schools.	School staff must agree on common needs which can be met through the circuit program.

JOB CREATION

Definition	A school-initiated and operated business which trains and employs students for specific jobs.
Purpose	To train students for a new job market which has been created by the school.
Program Description	In rural areas, economic development frequently follows training, rather than the other way around. Training for economic development requires no major change in program direction but rather added emphasis on planning and placement.
Planning	Community and education system approval must first be secured for this option. Following this, school administration, faculty, and students determine what business ventures would contribute most to the economic growth of the community. Some criteria in selecting a venture: --Is the training potential for students high? --Will the venture generate enough revenue to cover costs? --Does the venture provide a useful community service or product? After the venture is selected, the business needs to be organized and procedures established for such things as inventory, pricing, and accounting. Expertise from the community would be helpful.
Staff Requirements	No additional staff are required.
Multimedia Use	None--unless this is the goal of the business.
Initial Cost	Start-up funds may be needed. The amount will depend on the type of venture and the initial scope of the project.
Additional Cost per Student	Nominal

Advantages

Community needs are addressed.

Students receive realistic job training.

A useful service to the community can be provided.

Linkages with community members can be strengthened.

Disadvantages

Start-up funds may be required.

Additional staff planning time may be necessary.

Scheduling and other traditional functions of the school may be disrupted.

Private business may object to invasion by public sector.

LEARNING CENTER SYSTEM

Definition	Instructional materials and equipment are organized so that students may progress on an individual basis while the teacher becomes a manager of the learning environment.
Purpose	To use teaching time more efficiently and to provide students a wider range of instructional objectives.
Description	Multimedia materials are integrated with teacher instruction to achieve learning objectives. Generally, competency-based instructional modules are developed. The instructor becomes a manager of the system, assisting individuals as they progress through the course.
Planning	The major steps in developing a learning system are: --Secure or develop a task analysis --Determine and organize tasks into small sequential steps --Designate a form of positive reinforcement and immediate confirmation for each active response by the student --Build in learner-controlled pacing of the instructional material --Make available a variety of choices for the student to complete modules--adapt the content to the student
Staff Requirements	No additional staff are required after the learning system has been implemented, but the development and implementation phases could require consultant fees and inservice costs for teachers.
Multimedia Use	Maximum
Initial Cost	Procurement, development, and implementation costs vary depending on the availability of materials and staff responsiveness. Costs for consumable student materials may be higher.
Additional Cost per Student	If consumable materials are used, costs will rise with the number of students.

Advantages

Teachers have more opportunities to interact with students on an individual basis.

Instruction will be tightly linked with objectives.

The system is transportable once developed.

Disadvantages

Revision of materials in order to stay up to date is time consuming.

Initial operating costs could be high.

Staff inservicing will be necessary.

Facility changes may be necessary.

MICROCOMPUTERS

Definition	Business-related minicourses are provided through the use of the microcomputer.
Purpose	To increase options in the curriculum.
Description	Microcomputers are used for skill training in keyboarding, data processing, and word processing. At the same time, instructional software for the microcomputer can be used in the teaching of accounting, general office and business procedures, and remedial language and math for the academically disadvantaged students. Instructions are individualized so students work at their own pace and on the lessons of their choice. A microcomputer lab is established so students can work throughout the day.
Planning	Evaluation of the various microcomputers and software packages must be made. Materials which best suit the needs of the students and the community should be purchased well in advance of the course so the instructor has time to work through them. Scheduling for students as well as lab instruction may have to be determined.
Staff Requirements	Existing staff should be able to supervise the lab. Inservice training will be necessary to acquaint instructors with microcomputers.
Multimedia Use	High
Initial Cost	High
Additional Cost per Student	Variable depending on amount of consumable instructional materials.

Advantages	*Disadvantages*
Students can work at their own pace.	Teacher inservicing will probably be required.
Curriculum can be broadened.	Initial cost is high.
Students are learning on up-to-date equipment.	Software needs may change and replacement can be expensive.

MINI COURSES

Definition	Introductory or highly specialized courses which are of a few days or weeks duration.
Purpose	To enhance regular program offerings and expand options for students.
Description	Mini courses provide an opportunity to introduce students to specific occupations or to provide them with highly specialized advanced content. Mini courses are also appealing as a break in the regular schedule. Packaging vocational content into mini courses can be done by identifying skills which can be taught in isolation. For example, a unit on installation of home security devices could be a mini course which provides students a salable skill.
Planning	Continuity is necessary so that omissions and duplications are omitted. Scheduling must include a sufficient number of mini courses so all students are enrolled or provide for alternatives for those who finish a mini course early. Alternative scheduling such as before and after school or during lunch break may also be considered. Credit for mini courses should also be arranged.
Staff Requirements	No additional staff are required.
Multimedia Use	As instructional materials are reorganized into mini courses, there is a tendency to update and improve media.
Initial Cost	Additional funds may be needed for new curriculum materials.
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
Mini courses are generally popular with students because they are planned on the basis of specific interests.	Students may receive an introduction to a vocation but not have access to further training.
Community involvement may be generated.	It may be difficult to schedule mini courses within the existing school day structure.
Opportunities to explore a wide range of interests are made available at low cost.	

MOBILE INSTRUCTIONAL MATERIALS

Definition	Instructional materials are organized and packaged to be moved from school to school.
Purpose	To broaden curriculum offerings to students.
Description	Sharing instructional materials reduces the initial purchase cost for any one school involved in the program. Several programs are purchased or developed and then rotated from school to school on a regular basis. The rotation schedule could be on a monthly basis for mini courses or for longer periods of time such as a semester or school year. Teachers already on staff use the materials on a prearranged schedule. Oftentimes, the materials are prepared for individualized instruction and include multimedia activities.
Planning	Instructional needs should be analyzed by the schools involved prior to deciding which subject materials will be purchased or developed for inclusion in the mobile curriculum. School staff will also have to make decisions concerning the rotation schedule. A contingency plan must be developed for inspecting and replacing damaged or lost items. Each school will also have to keep records of expenses for transporting materials to ascertain cost effectiveness.
Staff Requirements	No additional staff are required.
Facilities Requirements	Some modifications may be necessary to house equipment. Work benches or study carrels may also be required.
Multimedia Use	Mobile curricula are frequently multimedia centered.
Initial Cost	Cost will vary depending on how many schools will share the materials. Also, transportation costs will vary with the amount of equipment included in the package.
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
Mobile instruction materials are able to fulfill the needs of several schools simultaneously.	Agreeing on materials needed and arranging schedules can pose problems.
Costs are shared by the schools involved.	An agreement for the disposition of damaged or lost materials must be in place.
As one teacher adds to the mobile materials, all others will benefit.	Each school is dependent upon the efficiency of another in transporting materials at the appropriate time.

MOBILE LABS

Definition	A furnished classroom moves from school to school so that several schools share the cost of expensive equipment and facilities.
Purpose	To expand curriculum offerings.
Description	A mobile unit is fitted with all of the equipment and instructional materials necessary for a particular course or program. Thus, a school which cannot afford its own electronics lab, for example, can be served by an electronics mobile lab. The mobile lab may be on a schedule which locates it at several schools during each day or it may be located at one of the cooperating schools for a designated time period.
Planning	A mobile lab is expensive and requires the same detailed planning done for a new facility. The floor and structure must be strong enough to bear a heavy weight. Ventilation and clean up must also be considered. Details such as teacher expertise, student counseling, community needs, scheduling, and articulation must be considered. A strong monitoring and evaluation component is likely to increase the success of the mobile unit. A close working relationship among the school personnel involved must be maintained.
Staff Requirements	Due to the specialized nature of some of the programs taught via mobile labs, it may be advantageous to hire an itinerant teacher. In many skill areas, such as clerical, the instructors in the various schools served may have the appropriate expertise to teach advanced courses which are not provided because of the lack of the necessary equipment. One mobile lab could then be outfitted for advanced clerical courses and used in all of the schools. An itinerant teacher would not be necessary.
Multimedia Use	High
Initial Cost	Purchasing and outfitting the mobile lab is expensive.
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
Several schools can share the expense of equipment.	Maintenance is costly.
The mobile van may stimulate a permanent program in the school.	Start-up costs are high.
Specific school and community needs can be met.	Scheduling can be difficult.

PARAPROFESSIONALS AND AIDES

Definition	Paraprofessionals and aides are hired to expand curriculum offerings or to assist instructors.
Purpose	To expand curriculum offerings and to provide for more individualization of instruction.
Description	While paraprofessionals or aides may not have legal responsibility for a classroom, they can augment the regular instruction provided. Paraprofessionals and aides might be responsible for tutoring or special lecture activities, assisting the students in independent or programmed study, or developing needed curriculum materials. With the use of assistants in the classroom, the instructor can serve more students, provide more individual attention, and have time to develop advanced lessons or refine existing plans.
Planning	As with any new endeavor, a needs assessment must be made to obtain the best utilization of new resources. If a combination of courses can be pulled together so that enough students are enrolled, then each participant may enjoy instruction in her/his special interest. Paraprofessionals or aides in the community who have special skills also need to be identified. Special skills may include the ability to tend and maintain machinery.
Staff Requirements	Additional regular full-time staff are not required but paraprofessionals or aides would be hired. Instructors will probably need inservicing to learn to work with paraprofessionals and aides.
Multimedia Use	Generally, multimedia use should increase because instructors would have more time to locate and obtain materials.
Initial Cost	There would be an increase in costs for the total amount spent on staffing. However, the addition of paraprofessionals and aides is far less expensive than regular instructors.
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
Additional help allows instructors time to concentrate on developing and implementing improved program offerings.	Teachers need to learn to work with paraprofessionals and aides.
Students are provided more individualized instruction. It is less expensive to add paraprofessionals and aides than regular teaching staff.	Budgeting and staffing procedures must allow for the hiring of paraprofessionals and aides.

PHASING

Definition	Two or more instructors team teach in combined classroom periods so that students study one major (integrated) curriculum topic rather than two or more isolated areas.
Purpose	To utilize expanded classroom time and combined teaching expertise to provide students better learning opportunities.
Description	Students study one major topic during combined class periods rather than changing classes every period. Teachers work together as a team in planning and carrying out the instructional objectives.
Planning	Combining courses and teacher expertise requires careful planning and teamwork. Generally, the steps required for implementation are: --Develop measurable objectives --Determine the content for each objective --Ascertain instructional methods and use of multimedia activities --Assign staff teaching responsibilities --Develop and implement the schedule
Staff Requirements	No new staff are required. Inservice and planning time may be necessary prior to implementation.
Multimedia Use	Sharing classroom time affords teachers the opportunity to search for and obtain multimedia.
Initial Cost	Initial orientation and planning time may require special funding.
Additional Cost per Student	Nominal

Advantages

Inexpensive because this strategy uses resources currently available.

Team spirit among teachers may be maximized.

Instructors learn from each other as they teach together.

More time is available to students to complete tasks.

Disadvantages

Determining teaching team membership may be difficult.

Instructors must understand concept of teaching together rather than teaching two subjects in the same classroom.

There may be scheduling problems.

PROGRAMMED INSTRUCTION

Definition	A method of delivering instruction which allows students to progress at their own rates.
Purpose	To provide a variety of courses as well as levels of advanced training.
Description	Programmed instruction provides a step-by-step presentation of information which students follow at their own pace. It is generally self directed. Therefore, a student could study a particular item or course whether or not any other student chooses the same objective. Aside from different courses of study, students may also pursue advanced levels of instruction. A student does not have to be kept from advancing because there are not enough other students at the same level.
Planning	Programmed instruction can be implemented by using either commercially- or teacher-made materials. If programmed materials are purchased, there will not be much preparatory work for instructors. However, they will need to become familiar with the contents and procedures of the materials to better assist students. The development of programmed materials is a time-consuming process. The advantage of having staff members do the development is that they will be thoroughly familiar with the material and will be able to focus on specific job requirements within the community.
Staff Requirements	No additional staff are required unless consultants are used for material development. Inservicing must be provided so that materials are fully utilized by faculty and students.
Multimedia Use	The use of multimedia is encouraged to offer students a choice of instructional modes.
Initial Cost	Depends on the experience of the staff and the scope of the initial effort. Costs can be reduced by avoiding consumable materials.
Additional Cost per Student	Will vary proportionately with the number of students and amount of consumable materials.

Advantages	*Disadvantages*
Both slow and fast learners are accommodated.	Faculty will need inservicing.
A large number of course offerings can be added to the curricula.	Developing or purchasing programmed instruction materials is costly.
Advanced level curriculum can be offered.	Materials must be constantly updated.

RURAL STUDENT VOCATIONAL PROGRAM (RSVP)

Definition	Rural students are transported to urban centers for short-term work experience.
Purpose	To expand on-the-job training experiences of high school students who live in communities where there are few training stations.
Description	Students participate in a two-week work experience of full-time employment in another community. Each of the participants receives round-trip transportation and room and board.
Planning	Work stations in another community must be identified and matched with student interests and aptitude. Employers do not pay the students, but it may be difficult to locate sites which will be of benefit to the student in a two-week period of time. Boarding home parents or other housing must also be obtained. Locating and inspecting sites is a time-consuming task. Guidelines for the selection of students must also be developed. In addition, parental agreement forms must be obtained.
Staff Requirements	Staff requirements will vary depending on the number of students involved. A full-time coordinator may be needed if the RSVP is run throughout the school year.
Multimedia Use	Minimal
Initial Cost	High. Housing and transportation are likely to be expensive.
Additional Cost per Student	Will go up proportionately with the number of students served.

Advantages	*Disadvantages*
Students are able to gain practical application of skills required in the classroom.	An extensive amount of planning is required.
The program provides an opportunity not available in the community.	The program may be costly.

STUDENT EXCHANGES

Definition

Students in one school are exchanged with students in another school.

Purpose

To provide educational opportunities to students by locating them in another school.

Description

Student exchanges with other schools are effective in enriching educational experiences. For example, vocational education articulation can be planned so that students receive beginning instruction at one school and advanced instruction at another. By sharing program access, cooperating schools can double the training opportunities for their students.

Planning

The planning process involves:

- --Surveying students to determine high priority areas which cannot be met with present curriculum
- --Assessing curricular offerings of other schools to determine where it would be feasible to send students
- --Contacting other schools to determine interest in exchanging
- --Assigning staff member to coordinate program and make up agreements with participating schools
- --Arranging for housing

Staff Requirements

Extra teaching staff will not be needed, but guidance and counseling, schedule adjustments, and travel arrangements are some of the services a coordinator will be expected to handle.

Initial Cost

Minimal

Additional Cost per Student

None

Advantages	*Disadvantages*
Students are provided an opportunity to experience another community and school.	Students have to re-locate.
Career training choices for students are doubled.	Housing and other special services may have to be provided.
	Coordination may prove difficult.

TEACHER EXCHANGE

Definition	Teachers exchange positions for a time period most advantageous to the two or more schools involved.
Purpose	To increase curriculum offerings and/or provide additional depth and breadth in a particular vocational program.
Description	Instructors of a special expertise or teaching skill are traded. An electronics instructor for example, may spend alternating years in a school so that students in two or more schools can take advantage of the training. Similarly, advanced courses where enrollment may be small are more viable if run on an every other year basis.
Planning	Each school administrator must assess the variety of skills available from the faculty. Knowing where needed expertise is missing assists in determining what skills will be looked for in locating a teacher for the exchange. At the same time, strengths and special expertise of the faculty can be shared with other administrators wishing to participate in the exchange. Expansion in the curriculum should be based on the needs of the students. Interest surveys and aptitude tests may be used to determine teacher exchange benefits.
Staff Requirements	No additional staff are required, but staff-on-hand must be willing to participate in an exchange program.
Multimedia Use	As teachers become acquainted with multimedia in the new location, usage should increase. However, it may not be feasible to transport some multimedia materials and equipment which the teacher has traditionally used.
Initial Cost	Cost of travel for exchange teachers may have to be incurred. Instructional materials and equipment may have to be transported.
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
Students are exposed to new ideas and challenges.	Union contracts may have to be negotiated.
Teachers may benefit from the variety of experience.	Teachers must be interested in the exchange program.

TELEVISION AND RADIO

Definition	Television and/or radio is used to deliver instruction.
Purpose	To enrich and expand curricula offerings.
Description	Radio and/or television programs featuring instruction of a particular objective are broadcast to schools participating in the activity.
Planning	Participating school administrators must agree to the instructional programs they wish taped. They must also come to agreement on the particular time a program will be broadcast.
Staff Requirements	Finding instructors who can effectively teach while being filmed also takes time. In some areas, community college staff take the responsibility of filming vocational instructors on the campus and then make the tapes available to public television stations. Inservice for the participating teachers is valuable in gaining acceptance of the method. Special instruction may be necessary for planning the integration of the television and/or radio program into the classroom.
Multimedia Use	High
Initial Cost	Depends on the equipment necessary for filming, broadcasting, and receiving. Also, some facility modifications may be necessary.
Additional Cost per Student	Nominal

Advantages

Programs can be made to fit specific needs.

Radio and/or television may provide opportunity for greater community involvement.

Costs can be cut as the schools become more involved in production.

Disadvantages

Generally, such a system may require a large initial investment.

Teachers may not have the technical or production expertise necessary.

Finding the proper time of day and the appropriate length for the broadcast that will meet the needs of each school can be formidable.

TWO-IN-ONE

Definition	Staff members teach two or more subjects simultaneously.
Purpose	To expand the limited number of subjects a small teaching staff can provide.
Description	The age of specialization has had its impact on teacher preservice programs. Many instructors have never experienced the challenge or enjoyed the variety of teaching two or more subjects at one time. Teachers who have tried the two-in-one approach report favorably on the outcome. This is particularly true in a small school where there is frequently a close knit educational organization and close student/teacher relationships.
Planning	Survey students and analyze the local job market to determine priority need areas. Present the data to staff and assess their willingness to expand the curriculum. If the response is favorable, analyze the educational backgrounds, interests, hobbies, and work experience of the faculty. Then select the additional subjects to be offered. Staff can then be selected to pick up the additional content. Planning for this approach should encompass enough time to enable the teachers to prepare and secure or develop appropriate instructional materials.
Staff Requirements	No additional staff are required. Additional support staff such as teacher or student aides might be advisable. Additional teacher planning time and extra pay may be required.
Multimedia Use	Teachers may use multimedia to present information because the subject matter may not be within their primary field of expertise.
Initial Cost	Additional teaching materials may be required.
Additional Cost per Student	Nominal unless consumable student materials are relied upon to provide instruction.

Advantages	*Disadvantages*
The curriculum can be expanded by better utilizing the expertise of existing staff members.	There must be adherence to union contract specifications.
Relationships within subjects may be better emphasized.	Teacher planning time may be increased.

TWO-WAY TELEVISED VOCATIONAL EDUCATION

Definition	A two-way television network is shared by a high school consortium.
Purpose	To expand curriculum offerings to students.
Description	Participating schools rotate the responsibility for hosting the televised instruction. A particular course is televised at one school and played in another. The school staff work together to determine which courses should be televised. Although the physical movements of the instructor may be restricted due to camera constraints, interaction between students and instructor can be taped. Thus, receiving school students benefit from the televised class discussion.
Planning	School personnel must list the courses presently available and those courses which they would like to provide. These lists are matched with other participating schools to determine which courses should be televised. Necessary equipment must be rented or purchased. Inservice training may have to be provided the camera operator, and instructors should be allowed time to practice televised lessons to make sure the instruction is clear.
Staff Requirements	Additional staff are not required if current members are agreeable to learning camera techniques. Staff members providing televised instruction will probably need additional planning time.
Multimedia Use	High
Initial Cost	High, depending on the equipment necessary.
Additional Cost per Student	Nominal

Advantages	*Disadvantages*
Schools can share the expertise of an instructor without requiring travel.	Inservicing may be necessary for both camera operators and televised instructors.
Community resources can be involved in the televised instruction.	The initial cost of obtaining television equipment could be high.

MINING COMMUNITY RESOURCES

Definition Methods of maximizing community resources.

Purpose To increase vocational options for students.

Description The following are methods to mine community resources:

1. Plan a cooperative work program for vocational students. Be flexible within state and education guidelines--consider paid and unpaid experiences, one day or week experiences.
2. Use an advisory committee at least twice a year to evaluate curriculum, tools, and equipment.
3. Ask local employers if state-of-the art equipment can be loaned or leased to the school.
4. Establish cooperative activities with local youth organizations. They will become familiar with vocational programs and the school may be able to use youth organization resources.
5. Ask vendors of tools and equipment to put on demonstrations for students.
6. Seek out people who have retired from education or business who can provide assistance and/or demonstrations in the classroom.
7. Ask industry representatives to speak on the latest technology.
8. Request assistance from local professional organizations or trade unions to help provide transportation for students for field trips, etc.
9. Ask local employers if students (and staff) may participate in special programs to upgrade staff members.

10. Make the rounds of local service organizations and unions to explain the needs of vocational programs.

11. Ask human service agencies to distribute promotional materials for your school.

12. Investigate the possibility of having local business and utility companies insert information about vocational programs in their monthly billings.

13. Encourage students to participate in state and local competitions.

14. Ask a radio or television station or a newspaper agency to co-sponsor school events.

15. Get acquainted with sources of information outside the school--government and social agencies, private organizations.

16. Borrow training films and materials from employers.

17. Ask instructors who belong to community groups to serve as liaison between the school and the organization.

18. Use the mailing lists of local professional groups for promotional purposes.

19. Encourage community groups to use school facilities for meetings--build rapport.

20. Investigate the possibility of exchanging services or surplus equipment with other educational institutions or community groups.

Summary

A review of the alternatives presented indicates a variety of strategies. It also becomes apparent that as diverse as these strategies may be, they have many similar secondary effects. Teamwork, cooperation, shared resources, and community involvement are a few of the bonuses which emanate from the employment of programs designed to improve and expand the delivery of vocational education in small, rural, and/or isolated schools.

In deciding which option or options to adapt, it may be helpful to classify the strategies. One possible classification might use the major change required for implementation as a basis for a taxonomy. The categories in this structure would appear as such:

- Schedule/Course Modification
- Individualized Learning
- Staff Modification
- Boarding Programs
- Technology
- Cooperative Programs
- Regional Centers
- Community Resources

By segregating the alternative strategies in such a manner, school officials can consider the positive and negative factors for whole categories of options. For example, those options in the "Staff Modification" category may be impossible because of hiring or union agreement restrictions. Another administrator may wish to improve community relations and would therefore concentrate on options in the "Community Resources" category.

Classifying the alternative strategies is also helpful in that the exercise helps to identify options which are more re-organizational in nature as opposed to those which require additions to the existing structure of the school curriculum. Within these two classifications, there are numerous sub-categories.

Some re-organizational options call for structuring class periods so that more courses may be offered during the school day. Another set of options restructures so that program offerings are combined in one setting. This allows students to pursue individual interests without the constraint of having a certain number of enrollees before a particular course may be offered.

Similarly, options which require additions to the school curriculum may be subdivided. Some additions involve technology; some involve personnel; some involve physical changes to the school building.

Analysis, either singularly or by category, of the various approaches identified allows school officials to determine which options best meet specific needs while utilizing available or more easily obtainable resources of the school and surrounding community. Improving and expanding the delivery of vocational education in small, rural, and/or isolated secondary schools in Hawaii may not require massive restructuring of the existing system but rather a thoughtful consideration of available resources to maximize program offerings.

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